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EXPLORATORY STUDY OF ONLINE REFERENCE SERVICES OF LIBRARIES IN NIGERIA

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ABSTRACT

The study reports an experiment that examines the availability of online reference services in libraries in Nigeria. 500 questionnaires were randomly distributed among Nigerian Library Association(NLA) conference attendees. The respondents were drawn from different types of libraries. A total of 311 questionnaires were usable, resulting in a 62 percent response rate. Data's were analyzed using percentage cross tabulation. The majority of the participants in Nigeria indicated that they are not aware of the existence of Online Reference Services (ORS), yet the project has been in existence for years .The present study was conducted to address five research questions. First, what is the level of awareness of ORS in your library? Second, how do librarians rate the usefulness of the ORS? Third, what are the infrastructures available in your library for the purpose of ORS? Fourth, what are the obstacles faced by libraries in establishing and utilizing ORS? and Fifth, what are the strategies to enhance the establishment of ORS?. The result shed light on the availability, usefulness, infrastructural availability, obstacles faced, and strategies to enhance the establishments of ORS, and recommendations were given.

INTRODUCTION

Research into the benefits of Online Reference Services (ORS) also called Virtual Reference Services (VRS) or Digital reference Services (DRS) and their potentials for enhancing information access electronically has a brief history in Nigeria due mostly to their relative infancy. ORS can be described as the electronic mediation between librarian and a user needing an answer to a query. No doubt, the incorporation of information and communication technologies (ICTs) into the reference services has affected its functioning at various levels: New ICT-based services has explored and adopted on ever growing number of innovations for providing information content and delivery.Similarly, reference librarians have found many ways to take advantages of technology in extending service beyond library environment.

The benefits drives by the provision of ORS are increasingly changing the way we access and use information in library and, reference services in particular. It is becoming one of the mega-topics in the information age as it is assumed that accessing information in traditional reference settings are not sufficient for the users to compete on the globalized

level. There is growing concern that traditional reference services fail to live up to expected, overall it appears that ORS is more useful since the reference librarian continuously monitor the progress which the clientele put to the given information. This is made possible because he is asked to provide an e-mail address. In this changing environment, reference desk by librarians who meet face-to-face or by phone with users in a defined physical space are increasingly supplemented by e-mail, virtual reference, instant messaging services, and web logs (Reinhardt and Harder, 2005) similarly, references in virtual environment afford clienteles who are shy in approaching reference librarian to submit their reference questions online. Beyond this, a good deal has been written about ORS and its implications for education and research without discrimination. One striking example is Stacy-Bates cited by Shachaf and Horowitz (2001) who observed that “Certain user groups do not come to the library due to physical disabilities, scheduling constraints or geographical distance. These users too might find virtual reference to be more accessible to their needs, as it provides services to users any time, any place. indeed, most users of online library services expect a wide range of information resources preferably in full-text, and ability to contact someone (usually by telephone or e-mail) when they require help using those resources (Dee and Allen, 2005). The ongoing expansion of technology is providing unprecedented opportunities for people to communicate and exchange information with others around the world. At the same time, “libraries are moving away from structures built up over decades (even centuries) around the print collection, on-campus classroom, and manageable growth rates in published information and, instead, are moving toward structures derived from digital communication, distributed learning, and an overwhelming surge in the creation and distribution of knowledge in multiple formats” (Ferguson, 2000)

No doubt, the emergence of the ORS over the last decade has had an undeniable effect on the ways the users seek information, as well as on the ways that users think about reference services. The impetus for addressing the issue of ORS in libraries in Nigeria becomes increasingly urgent when you consider the numerous benefits

In this paper I reported on a research which aimed at knowing the perceptions of librarians on the new ICT driven reference services. In completing the research project I gained various insights into the challenges of including ORS in our libraries. The study was guided by the following research questions;

- What is the level of awareness of ORS items in your library?
- What is the usefulness of ORS as perceived by the librarians?
- What are the infrastructures available in your library for the purpose of ORS?
- What are the obstacles faced by libraries in establishing and utilizing ORS?
- What are the strategies to enhance the establishment of ORS?

STATEMENT OF PROBLEM

Reference services establish a contact between the librarian and the user, and this is a well established and standard feature of any library regardless of the size of its collections or the type of clientele. Recently, there has been a paradigm shift from the traditional way of

offering services, to electronic way. But this modern way of offering such services tend to be plagued by multiple of problem. At the heart of the problem lie the key challenges inherent in infrastructure provision, particularly the provision of bandwidth. The study pointed bandwidth for particular attention because of its importance to ICT planning and implementation. The greater the capacity, the more likely it is that downloads will be faster. Very often, however bandwidth numbers represent theoretical or peak performance; bottlenecks which slow down data transfer can occur as a result of network overload. Most libraries in Nigeria don't have sufficient bandwidth. It is expensive and in general bandwidth rates are at least ten times higher in Africa than they are in North America and can be up to 100 times more costly for broadband connections. (Partnership for Higher Education in Africa, 2004)

Developing countries lag far behind other nations with internet access and usage. On the average, only 1 in 130 people in Africa has a computer (while in North America and Europe, 1 in every 2 people have access to the internet. 90% of students in Africa have never used the internet. (en.wikipedia.org/wiki/computer-technology-for-developing-areas).

According to Ogunsola (2004):

“It must be realized that many Nigerian libraries, especially in the universities, face various problems in their library operations. These problems are not really of the library's making but it is the usual problem confronting most of the computer installations all over the country today. The shortage of man power and lack of spare parts coupled with this is the problem of constant computer breakdowns and low level of electricity supply. This problem has really slowed the activities of Nigerian university libraries in utilizing the global information and technological innovations for the services of their clientele.

Perhaps of even great concern, however, is the quality of human resources output from Nigeria higher education institutions, given their lack of adequate teaching laboratories and the level of facilities deterioration in general (including the libraries). These factors combined with a failure to revise technical curricula to take into consideration recent ICT developments, has trapped and frozen course offerings and computer centers in the era of mainframe and data-crunching equipment.

RELATED LITERATURE REVIEW

The Online Reference Services (ORS) is quite a new concept in librarianship. Many authors have defined ORS depending on their orientation. For example, white (2001) defined it as an information access services in which people ask questions via electronic means (such as e-mail or web forms). In turn, knowledgeable individuals answer questions, and responses are transmitted via electronic means. Interim search processes need not involve electronic devices although they often do. There may even be interim contact with questioners via telephone or electronic means if questions require classification. McLennen cited by Pomerantz, Nkhison, Belanger (2004) stated that an early model of the reference transaction as it takes place online was developed by the internet public library and was presented in a simplified form by Michael McLennan at the 2001 virtual reference Desk conference. ORS can also be defined as a network of expertise, intermediation and resources placed at the disposal of someone seeking answers in an online environment or can provide support for users who find online tool and resources unfamiliar difficult to learn or insufficient to answer

their information needs. It can also provide valuable user feedback to collection builders so that they may better tailor their resources and maximize their investment in content creation (Digital Reference. Available at <http://quartz.syr.edu/eduref/digital-reference.htm>) According to Sherikar, Jang jadhav (2006), digital reference replicates in the digital library environment what is most valued in the physical, especially public, environment personalized guidance in the gathering and selection of the best resources. Similarly, Sloan (2002) defined ORS as “The provision of reference services, involving collaboration between computer-based medium. These services can utilize various media, including e-mail, web forms, chat (including instant messaging services) video, web customer call center software, voice over internet protocol (VOIP). They further noted that library reference services whether at the desk, by synchronous media such as chat, are generally provided in an interactive setting that involves two parties, the librarian and the user”. The provision of online reference services, specifically via e-mail, enables users who were unconformable approaching a librarian in person to submit anonymous questions to a virtual reference service (Coffman, 2003). Pomerantz, Jeffrey and Luo (2006) in a study titled” motivations and uses: Evaluating virtual reference service from the user’s perspective”. The findings of the study indicated that 32 of 68 users (475%) cited convenience as their reason for using the chat reference service. Other reasons for using it included not finding the information elsewhere(10,15%),curiosity (9,13%),discovering the service by chance(8,12%)recommendation from other people(5,7%) personal preferences(5,7%) and the lack of availability from other sources(1,1.5%). The respondents agreed that online reference services is fast, efficient, and questions may be answered immediately, that the services is easy to use, always available and users found it to be less trouble than other forms of reference.

Additionally, Bushallow -Wibur et al (1996) echo this sentiment when they stated that some “user groups do not come to the library due to physical disabilities, scheduling constraints, or geographical, distance. These users too might find virtual reference to be more accessible for their needs, as it provides services to users any time, any place. Users can send reference queries via e-mail whenever they have questions”. In this context, Lipton cited by Cummings, Cummings and Frederickson (2007) argued that the “ability to communicate with users in a variety of modes is an important one for librarians. It is often cited as a reason that many new services are designed or that many new services are designed or purchased and implemented.” Certainly, when communication is mediated by computers, interactions are more impersonal and task oriented because of the lack of social cues, lack of context, and lack of non-verbal behavior. The decrease in social cues can have a democratizing effect on communication, resulting for example in status equalization (Shachaf and Horowitz, 2006). Given its enormous relevance, it is possible that reference services will be more equal when provided online because during the reference interview (Via e-mail) blatant differences do not interfere. Also, e-mail mediates intercultural communication and reduces miscommunication (Shachaf, 2005).

In addition to this body of work specifically on the benefit of ORS, there is also a discussion of problems associated with usability of ORS and others. For example “Usability, that is, how easy-to-use and intuitive end-user interface are, becomes the developmental keystone of a successful online library presence, simple because users cannot access the information easily, there is little point expending the enormous effort and expense it take to provide digital reference.

However, libraries are finding that as accessible as their online resources appear to be, patrons still require substantial assistance in effectively utilizing these resources (Dee and

Allen (2006). Dee and Allen (2006) piece investigates the usability of digital services on academic health science library web sites. Their study is one of the few that is based on usability. Dee and Allen results show that most libraries offered some form of digital reference services, the extent and nature of the services varied, with only a minority of the libraries offering chat while an even smaller group offered no digital reference services. This shows a strong commitment to reach out to their patronage using synchronous electronic means (e-mail). The study concluded that the lack of usability as an explanation for the underused of digital reference services (primarily chat) was not wholly supported by the result of the study.

Dee (2002) presented the results of a survey on the chat Reference Service in medical libraries found that many medical libraries were not offering chat services for a variety of reasons which include:

- a. Staffing shortages
- b. Perceived lack of interest by library users
- c. Chat software issues and
- d. Use of other reference services. Coffman and Arret (2004) have written extensively on chat reference services. In a two part article, they argued that there was a marked decline in chat reference “Patrons” despite the fact that most of the library chat services had just opened for business approximately one year prior. Cummings, Cummings and Frederickson (2007) extended this, when they reported that many chat services were also discontinued after only a few short years of business.

Admittedly, staffing is a major problem of Online Reference Services, Cassel (1999) in his book, “developing Reference collections and services in an Electronic Age, devote more than a page on changing staff needs in digital era. According to him “Staffing must also change as a result of technology. The original goal of technology to reduce staff size has not been realized, instead technology has brought a redeployment of staff and the addition of staff with technological expertise . . . librarians and other staff must learn how to use new equipment and become familiar with new databases. Various studies have mentioned the various infrastructural problems facing various institutions including libraries in developing world (Ekwelem, 2010) Similarly, Koelen and Quayle-Ballard (2009) echoed the same sentiment when they observed that the training of Librarians and information professionals is needed so they can meet the challenge of providing information services in the new era. The critical need for librarians in developing countries is to understand how research practices are changing and what is required (with regard to infrastructure and skills) to improve and strengthen library support for research. World trade organization (1992) argued that congestion on the internet has become a problem. The solution to the problem is the expansion of infrastructure capacity through more fiber-optic cables and satellites or the use of new networks. But the lack of infrastructure is often a more general problem even in terms of insufficient telephone connections, and many countries would be glad if their only problem in this area was occasional congestion on the internet.”

METHODOLOGY

The Sample

Obtaining a sample of librarians in different categories across Nigeria proved to be difficult. After options available to the researcher were considered, distributing the questionnaire during the annual national conference of the Nigeria Library Association (NLA) was considered. The members of the NLA represent all types of library including Academic, College, Special, Public and School Library. 697 librarians registered for the conference but over 800 actually attended the conference (NLA 2011) geographically, librarians from 37 states in Nigeria including the federal capital territory were in attendant.

500 questioners were randomly distributed among conference attendances. The respondents were drawn from different types of libraries.

There are definite limitations to the method of sampling employed in this study. In a busy conference it is certain that you may find it difficult to identified librarians working in various types of libraries. In fact, measuring the availability, usefulness, infrastructural availability and obstacles to ORS establishment is a more accurate description of this study.

The Survey

A 43-question survey instrument designed to measure the availability and usefulness of ORS in libraries in Nigeria was administered. Selected participant who were given the questionnaire with a covering letter explaining the purpose of the research, boxes were provided at a designated areas at the Conference Hall where the participant were requested to drop them after completion.

The survey instrument consisted of six separate sections. The first section inquired about the demography of the respondents. The second section polled their knowledge of awareness of the availability of Online Reference Services Via a series of nine questions. The third section dealt with how the librarians rate the usefulness of ORS Via a series of nine true/false questions. The Fourth section of the instrument measured the infrastructures available for the purpose of ORS in libraries. Several ORS infrastructures were listed, and the availability was measured by indicating available or not available. The fifth section measured the extent of obstacles faced by libraries in establishing and utilizing ORS. Questions were designed to measure obstacles likely to be faced by libraries by the establishment of ORS. The last section allowed respondents to indicate the perceived strategies to enhance the establishment and utilization of ORS in libraries. Several strategies were listed, and their levels of acceptability were measured by indicating Strongly Agreed (SA), Agreed, Disagreed, and Strongly Disagreed.

Response Rate

The respondents were given 3 days response period to complete the survey and returned it via boxes provided at strategic positions inside the conference arena .Three hundred and thirty five questionnaires were returned, which represent 67percent) 23 questioners or 7 percent had to be discarded due to indications that the respondents did not work in library environment or that the questionnaire was incomplete. A total of 311 questionnaires were usable, resulting in a 62 percent response rate.

Data were analyzed using percentage cross tabulation.

FINDINGS

Gender

In the overall total, 54 percent (or 174 were female) and 46 percent (or 165 were male) indicating that there are more female than male that attended the conference.

Age

The respondents were requested to indicate what age category they belong. In all, 11.8 percent (or 36) were between the age of 20-30, 45.7 percent (or 143) were in 31-40 age range, and 26 percent (or 83) of the respondents were 41 to 50. Similarly, 16 percent (or 38) were in the range of 51-60 years and finally 6 percent (or 19) of the respondents indicated that they are over 60 years.

Professional Qualification

The Author divided the sample into 3 Categories: Bachelor of Library and Information Science Degree Holders, Masters of Library and Information Science Holders and PHD Holders. Those with BLS Degree were 121, MLS Holders were 175 and 23 respondents were PHD holders.

Types of Library

In total, 59 percent (or 189) of the survey respondents came from academic libraries, 13 percent (or 43) from college library, 4.4 percent, (or 14) came from special library, while 15.4 percent (or 49) were from public library, finally, 8 percent (or 24) were from school library.

Rank

In order to identify the rank in the sample, the questionnaire provided categories for the respondents to best describe their ranks or equivalent in the institution where they work. The categories were university Librarian/director, Deputy University Librarian\Assistant director, Principal Librarian, Librarian 1, Librarian 2, and Assistant librarian (see table 1)

Table 1: Rank of Respondents

| Items | No | % |
|---|------------|---------------|
| University Librarian/Directors | 3 | 1.00 |
| Deputy University Librarian/ Deputy Directors | 7 | 2.0 |
| Principal Librarian | 83 | 26.0 |
| Senior Librarian | 103 | 33.0 |
| Librarian 1 | 65 | 21.0 |
| Librarian11 | 30 | 11.00 |
| Assistant Librarian | 20 | 6.00 |
| Total | 311 | 100.00 |

From the above table 1, senior Librarian or its equivalent has (33%), the largest number of the respondents, followed by principal librarian or its equivalent (26%) and the least was the University Librarian/ Directors with only one per cent.

Table 2: AWARENESS OF ORS

| S/ N | Items | VMA | % | MA | % | FA | % | NA | % |
|------|---------------------------------------|-----|----|-----|----|----|----|-----|----|
| 1. | Instant messaging (Ask-a-Librarian) | 9 | 3 | 264 | 77 | 15 | 9 | 23 | 7 |
| 2. | E-mail reference service | 266 | 86 | 34 | 11 | 3 | 16 | 8 | 3 |
| 3. | Face book (Library fan page) | 71 | 23 | 193 | 62 | 33 | 11 | 14 | 5 |
| 4. | Web forms (in Library website) | 39 | 13 | 43 | 14 | 18 | 6 | 211 | 68 |
| 5. | Voice-over-IP (VOIP) | 31 | 10 | 11 | 4 | 12 | 4 | 257 | 83 |
| 6. | SMS reference | 161 | 52 | 69 | 22 | 17 | 5 | 64 | 21 |
| 7. | Searchable frequently asked questions | 29 | 9 | 31 | 10 | 43 | 14 | 208 | 67 |
| 8. | Online tutorials | 32 | 10 | 53 | 17 | 41 | 13 | 185 | 59 |
| 9. | Video conferencing | 56 | 18 | 16 | 5 | 24 | 8 | 215 | 69 |

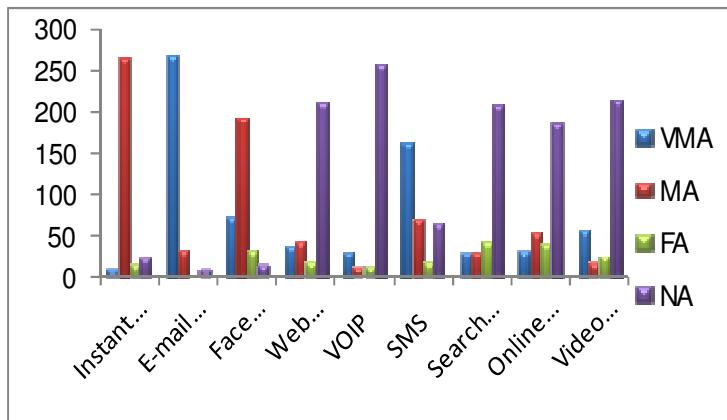


Figure 1: Availability of ORS

KEYS

VMA – Very Much Aware

MA – Moderately Aware

FA – Fairly Aware

NA – Not Aware

Most of the respondents 264 (see table2 and fig.3) (or77%) are moderately aware of the existence of instant messaging (Ask-a-librarian). The vast majority of them, 266 (or 86%) are “very much aware” of e-mail reference service. 193 (or 62%) of the respondents are “moderately aware” of the existence of face books (library fan page), majority of the respondents, 211 (or 68%) are “not aware” of the existence of web forms (in library website).

The majority of the respondents, 208 (or 67%) indicated that they “are not aware” of searchable frequently Asked questions. With reference to Online tutorials, 185 (or 59%) of the respondents reported that they are “not aware” of the service. With respect to the awareness of video conferencing, 215 respondents (or 69%) indicated that they are “not aware” of such service.

The researcher explained within the questionnaire, the usefulness of ORS based on information’s from literatures.

TABLE 3: USEFULNESS OF ORS

| S/N | ITEMS | VU | % | MU | % | FU | % | NU | % |
|-----|--------------------------------------|-----|----|----|----|----|-----|----|-----|
| 1 | Instant Messaging (Ask a Librarian) | 263 | 85 | 41 | 13 | 7 | 13 | - | - |
| 2 | E-mail Reference Services | 291 | 94 | 19 | 6 | 1 | 0.3 | - | - |
| 3 | Facebook (Lib. Fan Page) | 235 | 76 | 31 | 10 | 45 | 14 | - | - |
| 4 | Web Forms (in Lib. Website) | 216 | 69 | 63 | 20 | 24 | 8 | 8 | 3 |
| 5 | Voice-over-IP (VOIP) | 283 | 91 | 21 | 7 | 7 | 2 | - | - |
| 6 | SMS Reference | 301 | 97 | 9 | 3 | - | - | 1 | 0.3 |
| 7 | Searchable Frequently Asked Question | 232 | 75 | 41 | 13 | 38 | - | - | - |
| 8 | Online Tutorials | 293 | 94 | 16 | 5 | 2 | 0.6 | - | - |
| 9 | Video Conferencing | 296 | 95 | 13 | 4 | 2 | 0.6 | - | - |

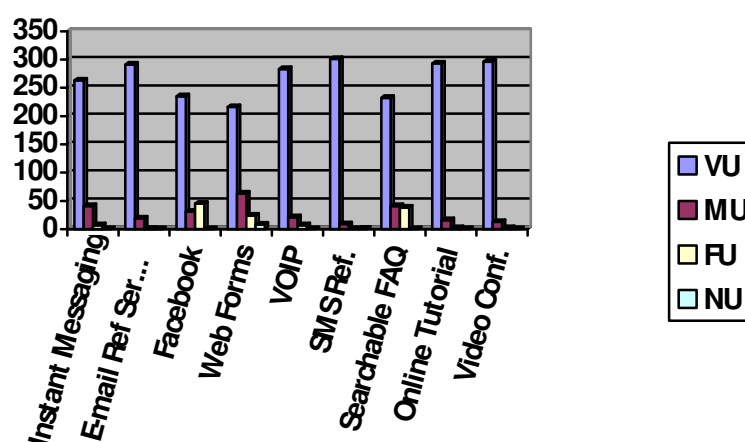


FIGURE 2: USEFULNESS OF ORS

Respondents were then requested to rate the usefulness of ORS, giving the following options; VU= Very Useful, MU= Moderately Useful, FU= Fairly Useful and NU= Not Useful. When asked about instant messaging the majority of respondents, 263 (or 85%) rate it “Very Useful”, on the issue of e- mail reference service the majority of the respondents also rate it “very high”, with 291 (or 94%) indicating “very useful”. With respect to Facebook, the respondents overwhelmingly rated it “very high” when 235 (or 76%) indicated “Very Useful”. While 216 of the respondents (or 69%) also rated web forms (in library website) “very useful”. A significantly higher percentage rated the issue of Voice-Over-IP (VOIP), with 283 of the respondents (or 91%) indicating “very useful”. In fact, only one respondent (or 0.3%) indicated that SMS reference is “not useful” , while 301 (or 97%) indicated “very useful”. In another query, the respondents were asked to rate the usefulness of searchable frequently asked questions. In response to this question, 232 respondents out of 311 (75%) indicated “Very Useful”. While no respondent indicated “not useful”. With respect to the issue of Online Tutorials, 293 (or 94%) favoured it as “Very Useful”.

Finally, the respondents were asked to rate the usefulness of video conferencing, responses indicated that 296 (296 or 95%) rated the item “very useful”.

Table 4: Infrastructural Availability

| S/N | ITEMS | AVAILABLE A | % | Not Available NA | % |
|-----|---|----------------|----|---------------------|----|
| 1. | Desktop computers | 293 | 94 | 18 | 6 |
| 2. | Laptops | 198 | 64 | 113 | 36 |
| 3. | Local Area Network (LAN) | 30 | 10 | 281 | 90 |
| 4. | Wireless Internet Connection | 198 | 64 | 113 | 36 |
| 5. | Library Software | 117 | 38 | 194 | 62 |
| 6. | Open Source Software | 146 | 47 | 165 | 53 |
| 7. | Skilled manpower | 119 | 38 | 192 | 62 |
| 8. | Web 2.0 tools e.g Facebook, Twitters, Skype, YouTube etc | 68 | 22 | 243 | 78 |

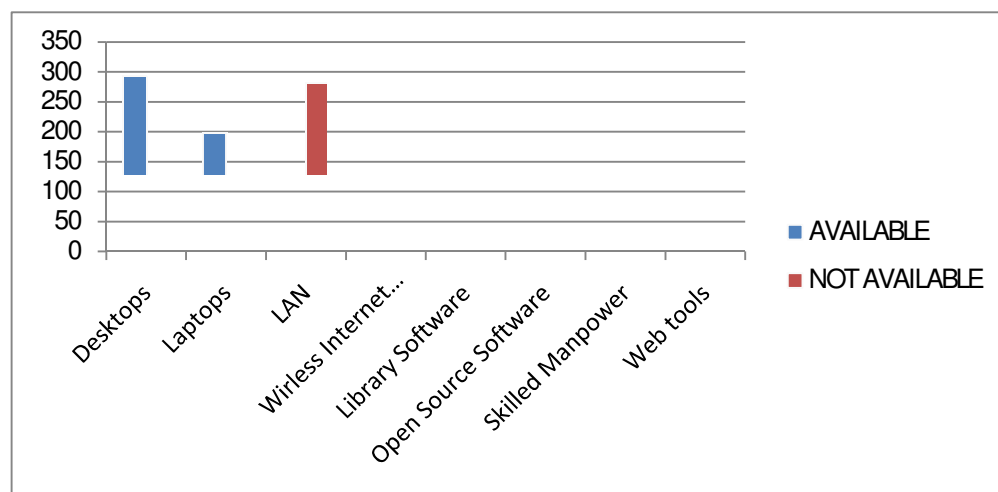


Figure 3: Infrastructural Availability

Respondents were asked to identify infrastructures available for the purpose of ORS, using “Available” and “Not Available”. On the availability of Desktop Computers, 293 (or 96 to the respondents indicated “available” while only 18 (or 6%) indicated “not available”. 198 (or 64%) indicated availability of laptops. Similarly, majority of the respondents, 281 (or 90%) shows that the Local Area Network (LAN) is “not available”. Also the findings shows that the Wireless Internet connection is “available” to the majority of the respondents, with 198 (or 64%) identifying its availability. With respect to the availability of library software, majority of the respondents, 194 (62%) reported “non-availability”. In a related query, respondents were asked the availability of open source software, in response to this question, 165 (or 53%) stated “non- availability” while, 146 (or 47%) stated “availability” while 146 (or 47%) stated “availability” of the software.

As reflected in Table 4 and fig.3, majority of the respondents, 192 (or 62%) indicated that skilled manpower is “not available”, with only 119 (or 38%) indicated its “availability”. Also, respondents were asked to rate the availability of web 2.0 tools e.g Facebook, Twitter, Skype, YouTube etc. 243 (or 78%) indicated that they are “not available”.

Table 5: Source Obstacles

| S/N | Items | VLE | % | LE | % | SE | % | NE | % |
|-----|---|-----|----|----|----|-----|----|----|-----|
| 1. | Network failure | 216 | 69 | 51 | 16 | 32 | 10 | 12 | 4 |
| 2. | Limited number of computers | 193 | 62 | 73 | 23 | 24 | 8 | 21 | 7 |
| 3. | Lack of skilled manpower | 203 | 85 | 91 | 29 | 11 | 4 | 6 | 2 |
| 4. | Unsuitable library software | 218 | 70 | 73 | 23 | 16 | 5 | 4 | 1 |
| 5. | Cost of implementation unwillingness of staff to adopt ORS | 50 | 2 | 43 | 14 | 218 | 70 | 1 | 0.3 |
| 6. | Power failure | 262 | 84 | 43 | 14 | 6 | 2 | . | . |
| 7. | Bandwidth limitation | 11 | 46 | 11 | 37 | 53 | 17 | 4 | 1 |
| 8. | shortage of web technology savvy librarians (ICT) complaint librarian | 216 | 84 | 50 | 16 | . | 1 | . | . |
| 9 | Inadequate funding | 301 | 97 | 10 | 3 | . | . | . | . |

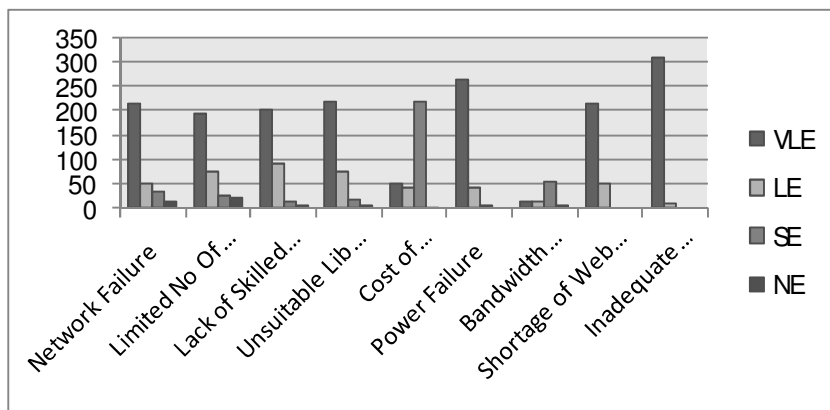


Figure 4: Obstacles to ORS

KEYS

VLE – Very Large Extent

LE – Large Extent

SE – Small Extent

NE – No Extent

Respondents were asked to identify the obstacles faced by libraries in establishing and utilizing ORS by choosing from eleven obstacles identified by the researcher based on discussions with librarians in various types of libraries. Table 5 and figure 4 shows that the most common obstacle faced by libraries in terms of establishing and inadequate funding with 301 (or 97%) approving very large extent. This is in line with Cassel, Kay Ann (1999) observation that library budgets are not funded for the addition of some many electronic resources. Most libraries, already budgeting carefully just to manage their small Library materials budgets, are feeling the financial strain of new electronic resources and have been forced to rethink their budgets. Followed using ORS was power failure, 262 respondents (or 84%), shortage of web-technology dents (or 84%), 216 (or 69%) lack of skilled manpower, reported by 203 respondents (or 85%). Also, findings showed that respondents did view unsuitable library software as an obstacle with 218 respondents (or 70%) identifying it as an obstacle. Other obstacles reported by the respondents included Network failure, and limited number of computers.

Table 6: Strategies for Establishment & Utilization of ORS

| S/N | Items | SA | A% | A | % | D | % | SD | % |
|-----|---|-----|----|----|----|---|---|----|---|
| 1. | Improved internet connectivity | 251 | 81 | 60 | 19 | . | . | . | . |
| 2. | Re-orientation/orientation of library staff | 263 | 85 | 46 | 15 | 2 | . | . | . |
| 3. | Provision of computer facilities | 251 | 81 | 60 | 19 | . | . | . | . |
| 4. | Improved electricity/steady power supply | 291 | 94 | 20 | 6 | . | . | . | . |
| 5. | Training of library users on ORS | 213 | 68 | 98 | 32 | . | . | . | . |

| | | | | | | | | | |
|----|---|-----|----|----|---|---|---|---|---|
| 6. | Purchase of suitable library software for ORS | 301 | 97 | 10 | 3 | . | . | . | . |
| 7. | Establishment of ORS policy in libraries | 296 | 95 | 15 | 5 | . | . | . | . |

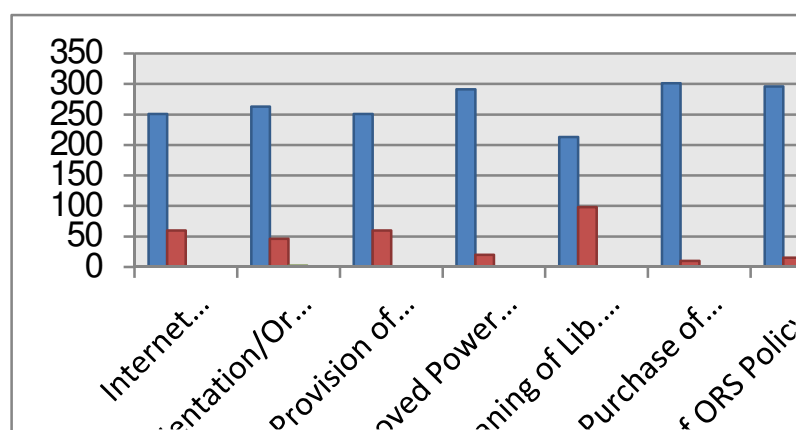


Figure 5: Strategies for Establishment and Utilization of ORS

KEYS

SA – Strongly Agree

A - Agree

D - Disagree

SD – Strongly Disagree

Respondents were asked to identify the strategies they perceived for establishment and utilization of ORS by using purchase of suitable library software for ORS, Establishment of ORS policy in libraries and improved electricity/steady power supply were highly recommended strategies, with large number of respondents in the strongly agreed categories as indicated in table 4 and fig.5. Other Strategies were recommended with varying degrees of agreement. The least recommended strategies were “training of library users on ORS”, “improved internet connectivity” and, “provision of computer facilities”.

DISCUSSION, CONCLUSION AND RECOMMENDATION

The results of this study showed that that the majority of the respondents were not aware of ORS. However, the importance of ORS in library cannot be over-emphasized. Academic libraries in particular have eagerly embraced the use of ORS to enhance and extend instructional opportunities. As rightly pointed out by Dee, and Allen (2006) “the

dizzying array of potential information sources has driven users of library services to seek assistance in greater depth, and from a wide variety of locales” Thus, the rise of digital reference services. The first survey question was concerned with the level of awareness of online reference service by librarians. Since the research instrument was administered during the 2011 annual conference of the NLA, it would be reasonable to expect that respondents would have worked in library settings for a reasonable period. Indeed, over 77% indicated that they are “not aware” of the existence of ORS in their libraries. This is not an anomaly, considering the fact that ORS is relatively a new programme in libraries, particularly in Nigeria, and that most libraries in Nigeria are still not computerized. Sherikar, Jange and Jadhav (2006) noted that Digital reference, also called virtual reference and Online reference, is a relatively new addition to library services that is gaining wide-popularity in public and academic libraries. In their 2007 survey of users preferences, Cummings, Cummings and Frederiksen (2007) noted that awareness of chat-based reference services was very low, although awareness appeared to grow by 7.3 in approximately five months between surveys, from 17.4% (26 of 149 respondents). In survey A to 24.7percent (48 of 194 respondents); in survey B. Coffman and Arret (2004) argued that virtual reference, which allows users to connect easily with librarians online, is becoming highly popular. Librarians answer thousands of questions every day over the internet.

The second question of the survey was intended to measure the usefulness of ORS, of the 311 respondents, over 80% rated all the listed items (see Table 3 and fig.2) very high. This confirms the finding of a study by Bell and Levy (2003) when they observed in a survey “Ask a librarian” that the respondents seemed generally positive about the service and showed a willingness to use the service again. They cited an article by Bristow (1992) which suggested that respondents tend to be overly positive and lack a critical component. Cummings and Frederiksen (2007) survey on users preferences argued that many within academic environment are open to the idea of chat-based reference or using chat for some loosely defined research purposes. This openness does not translate into a high level of use.

The third question is on infrastructures available for the ORS. As can be seen in table 3 which provides percentages and the basic numbers. The results of this study indicated that Nigeria libraries are following the trends already identifies in previous works from other countries, namely that in general, cost of infrastructures is perhaps the major issue facing libraries today. According to the findings of this study, availability of desk-top computer is high (293 or 94%) and Local Area Network was the least available infrastructure. This may be attributed to funding and budget cut by library funders. Although libraries are changing and adapting rapidly to the emerging world of networked information, there is a subtle and ironic dimension. Perhaps the best overview of funding problem with respect to libraries comes from Smallwood (2010) who contributed a crucial article that focused exclusively on funding. He argued that budget cut for libraries, university presses, journals, and culture, which are converging to threaten the infrastructure on which professors and students depend. Also, Greenstein (2010) assert that university libraries are principally reliant for their operating revenues on the same funds that meet the costs of university’s academic departments(including ,crucially, the faculties salaries).bluntly, those funds are diminished by

the global recession, and it is not clear that they are likely to rebound ,let alone resumed their growth, any time soon.

The fourth research question is concerned with barriers face by libraries in establishing and utilizing ORS. Of all the listed items, power failure, shortage of web technologies, cost of implementation. And network failure. This finding, support the results f a study conducted by Igun (2005). When He noted that:

“Network failures and crashes that affected workstations and network drivers after installation, some of the workstation could not access the service. This was due to unavailability of skilled manpower to maintain and manage the systems after the initial installation. Furthermore, he noted that there is also the problem of electric power fluctuation. Epileptic power supply increases the cost of access. Supply of electricity needs to be optimal to enable libraries to provide seamless ORS through local areas Networks, wide area Networks and the internet. Inefficiency is the word to describe a situation where libraries have to depend on power generators, as the primary, reliable power supply. This constitutes a barrier to growth and sustainable development.”

Johnson (1991) has a slightly more disturbing view, when he argued that the major reason for the failure of library automation projects in developing countries is that library staff and funding agencies plan without sufficient knowledge of hardware, and power supply requirements. Writing on importance of training, Cassel, K. A. (1999) observed that the new technology has made staff training development an increasingly important issue. Training has become an integral part of library work, and staff skills must b e continually upgraded.

Research question 5 dealt with strategies to enhance the establishment of ORS. Some libraries in Nigeria are now providing electronic reference service and they vary in their policy as whether to charge fee or who will be allowed to use the library. However, Cassel (1999) suggests that libraries should establish an electronic reference service policy to determine the parameters to this kind of service. For example, the library must decide example, the library must decide how much time a staff member must decided how much time a staff member should spend on a question and what the user should be told once it is determine that the question search is extensive.

Much has been made in library about re-orientation/orientation of library staff. From the Cassel (1999) point of view “Staff constitutes another clientele that needs instruction as new electronic reference tools are introduced in library. Staff must have a chance to learn about a reference resource before it is available to the library users, who will expect the staff to assist them with it.

Conclusion

ORS is advertise as being able to reach patrons at any time of the day or night at any location in the world, the investigated concluded that the validity of the results and the strength of the ORS as an instrument of information assessment are enormous, Vin further reiterated the most difficult aspect of the evolving world of electronic technology is the cost. Data gathered from studies indicate that libraries are truly struggling with the overwhelming

costs of both having enough funding for new technology infrastructure and having sufficient funding to continue to upgrade the hardware and software valuable information exists on the impact of ORS on library services. Most of the published work of this project focuses on topics such as usability, rarely can one find an emphasis on availability in developing countries such as Nigeria. The emergence ORS initiatives in Nigerian library system seem inevitable. In few years times changes in technology will enormously alter the way reference and library as a whole will be run.

Recommendation

Based on the findings of the study, the following recommendations are made,

- Information services through ORS are not popular among librarians in Nigeria. To prevent users from being excluded from the services, separate budget should be established in support of ORS establishment.
- It is essential to raise awareness of the ORS in libraries. The libraries can make use of the various methods to raise such awareness by in-house training, seminars, workshops, publications. For the general public can be raised by means of exhibition, fairs, use of media, websites, etc.
- Telecommunication engineers should as a matter of urgency be employed by libraries to take care of our ICT facilities.
- Libraries should provide large amount of bandwidth to enable them provide ORS services to users.

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